

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **072018-001**

Project Number: 2018-02-011
Installation Number: 031-0112

Parent Company: SEMO Milling, LLC

Parent Company Address: 261 River Road, Scott City, MO 63780

Installation Name: SEMO Milling, LLC

Installation Address: 261 River Road, Scott City, MO 63780

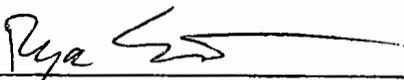
Location Information: Scott County (S21, T30N, R14E)

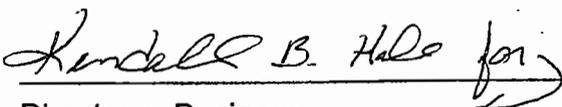
Application for Authority to Construct was made for:

The installation of a new fine grinding and transfer system. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.


Prepared by
Ryan Schott
New Source Review Unit


Director or Designee
Department of Natural Resources

JUL 03 2018

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of startup of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual startup of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:

Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
<http://dnr.mo.gov/regions/>

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

2. **Capture Device Requirement**
 - A. SEMO Milling, LLC shall ensure the capture of emissions from the equipment listed in Special Condition 1.A by using at least one of the following methods:
 - 1) Enclosing the equipment, such that the only openings are for material entry/exit
 - 2) Routing the emissions to equipment that utilizes negative pressure, such as an aspirator, that vents to a control device

3. **Record Keeping and Reporting Requirements**
 - A. SEMO Milling, LLC shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

 - B. SEMO Milling, LLC shall report to the Air Pollution Control Program's Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by email at aircompliancereporting@dnr.mo.gov, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

SEMO Milling, LLC
Scott County (S21, T30N, R14E)

1. **Control Device Requirement – Baghouse**
 - A. SEMO Milling, LLC shall control emissions from the following equipment using baghouses, as specified in the permit application.

1)	EU332	Pneumatic Transfer	Baghouse C107
2)	EU333	Grinder Feed Conveyor	Baghouse C153
3)	EU334	Prater Fine Grinder	Baghouse C153
4)	EU335	Fine Grinder Negative Lift	Baghouse C153
5)	EU336	750 Flour Collection Conveyor	Baghouse C109
6)	EU337	410 Meal Collection Conveyor	Baghouse C102
 - B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. Each baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
 - C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
 - D. SEMO Milling, LLC shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours while the plant is operating. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
 - E. SEMO Milling, LLC shall maintain a copy of the baghouse manufacturer's performance warranty on site.
 - F. SEMO Milling, LLC shall maintain an operating and maintenance log for the baghouses, which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions (tons), duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2018-02-011
Installation ID Number: 031-0112
Permit Number: 072018-001

Installation Address:
SEMO Milling, LLC
261 River Road
Scott City, MO 63780

Parent Company:
SEMO Milling, LLC
261 River Road
Scott City, MO 63780

Scott County (S21, T30N, R14E)

REVIEW SUMMARY

- SEMO Milling, LLC has applied for authority to install a new fine grinding and transfer system.
- The application was deemed complete on February 22, 2018.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation. 40 CFR 60 Subpart DD – *Standards of Performance for Grain Elevators* does not apply because the installation has a storage capacity less than 1 million bushels.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Baghouses are being used to control particulate emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.
- This installation is located in Scott County, an attainment/unclassifiable area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year, and fugitive emissions are not counted toward major source applicability.
- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.

- Submittal of an amendment to your Basic Operating Permit is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

SEMO Milling, LLC operates a grain elevator in Scott City, Missouri. The installation produces food-grade corn products, including flour, cornmeal, and brewer's grits. A process by-product, known as hominy, is also produced for the animal feed industry. SEMO Milling, LLC is considered a minor source for construction permits and currently has a Basic Operating Permit under Project No. 2013-10-020. The following New Source Review permits have been issued to SEMO Milling, LLC from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
072012-014	Installation of various equipment (degerminators, sifters, aspirators, etc.)
122014-006	Addition of handling equipment to existing product stream
032015-008	Installation of a corn/soy blending system
092016-017	Installation of sifting and enriching process for coarse cornmeal
122017-012	Addition of collecting, diverting, sifting, and milling processes
122017-012A	Control device updates

PROJECT DESCRIPTION

SEMO Milling, LLC is proposing to install a new fine grinding system that utilizes existing mill product streams EU121 & EU175. These streams will be collected and transferred via a new closed loop, positive pneumatic transfer system (EU332) to a new fine grinder feed conveyor (EU333), which will feed the new Prater fine grinder (EU334). Fine ground product will discharge to a negative lift (EU335), which is controlled by a new fines baghouse (C153), where it will be collected and fed back to EU332. There, the product will be transferred back to the existing Norvell product sifter (EU315). Discharged sifted product streams from EU315 will be collected in the new 750 flour collection conveyor (EU336) and blended into existing positive pneumatic transfer (EU190) or collected in the new 410 meal collection conveyor (EU337) and blended into the existing positive pneumatic transfer (EU192). The overall maximum design rate of the new equipment will be 6,000 pounds per hour.

The new equipment in this project will not debottleneck any existing processes, as the fine grinding system will operate in series with the equipment currently at the facility. Because this project will allow a portion of the product to be more finely ground and then processed in the existing equipment, potential PM_{2.5} emissions from the existing equipment could be expected to increase; however, many of the process emission factors for PM_{2.5} are equal to PM₁₀, thereby causing no change in emissions. Also, all

conveyors at the installation are enclosed and controlled by baghouses, which significantly reduce both PM₁₀ and PM_{2.5} emissions, making the difference between them negligible. Therefore, none of the existing equipment is expected to have a notable increase in potential emissions.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42). Potential emissions of all equipment were calculated using their maximum design rates (6,000 pounds per hour).

Potential emissions from the pneumatic transfer system (EU332) were calculated using the pneumatic cement unloading emission factors taken from Table 11.12-2 of AP-42 Section 11.12 *Concrete Batching* (June 2006). The system is enclosed and all transfers are controlled by a baghouse; therefore, the controlled emission factors were used. Since there are no emission factors for the transfer of fine ground grain or for pneumatic grain transfer, these emission factors are most representative of the process.

Potential emissions from the conveyors (EU333, EU336 & EU337) and the negative lift (EU335) were calculated using the headhouse and grain handling emission factors taken from Table 9.9.1-1 of AP-42 Section 9.9.1 *Grain Elevators & Processes* (May 2003). All conveyors and the negative lift are enclosed and controlled by a baghouse; therefore, the controlled emission factors were used.

Potential emissions from the Prater fine grinder (EU334) were calculated using the animal feed hammer mill emission factors taken from Table 9.9.1-2 of AP-42 Section 9.9.1. The grinder is controlled by a baghouse; therefore, the controlled emission factors were used. Since there are no emission factors for dry corn milling listed, these emission factors are most representative of the process.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the installation's previous construction permit (122017-012A). Existing actual emissions were taken from the installation's 2016 EIQ. Potential emissions of the project represent the potential of the new equipment, assuming continuous operation (8,760 hours per year) with controls. New potential emissions of the installation represent the sum of the existing potential emissions and the potential emissions of the project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2016 EIQ)	Potential Emissions of the Project	New Potential Emissions of the Installation
PM	25.0	N/D	N/D	0.36	N/D
PM ₁₀	15.0	27.83	2.41	0.27	28.10
PM _{2.5}	10.0	7.25	1.42	0.19	7.44
SO _x	40.0	0.08	N/D	N/A	N/A
NO _x	40.0	5.25	0.30	N/A	N/A
VOC	40.0	0.69	0.03	N/A	N/A
CO	100.0	4.48	0.25	N/A	N/A
Total HAPs	25.0	0.48	N/D	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

SEMO Milling, LLC shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050
- *Operating Permits*, 10 CSR 10-6.065
- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
 - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

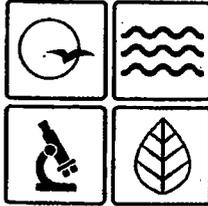
The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 6, 2018, received February 8, 2018, designating SEMO Milling, LLC as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

%percent	Mgal1,000 gallons
°Fdegrees Fahrenheit	MWmegawatt
acfmactual cubic feet per minute	MHDRmaximum hourly design rate
BACTBest Available Control Technology	MMBtuMillion British thermal units
BMPsBest Management Practices	MMCFmillion cubic feet
BtuBritish thermal unit	MSDSMaterial Safety Data Sheet
CAM Compliance Assurance Monitoring	NAAQSNational Ambient Air Quality Standards
CASChemical Abstracts Service	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CEMS Continuous Emission Monitor System	NO_xnitrogen oxides
CFRCode of Federal Regulations	NSPSNew Source Performance Standards
COcarbon monoxide	NSRNew Source Review
CO₂carbon dioxide	PMparticulate matter
CO_{2e}carbon dioxide equivalent	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
COMS Continuous Opacity Monitoring System	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CSRCode of State Regulations	ppmparts per million
dscfdry standard cubic feet	PSDPrevention of Significant Deterioration
EIQEmission Inventory Questionnaire	PTEpotential to emit
EPEmission Point	RACTReasonable Available Control Technology
EPAEnvironmental Protection Agency	RALRisk Assessment Level
EUEmission Unit	SCCSource Classification Code
fpsfeet per second	scfmstandard cubic feet per minute
ftfeet	SDSSafety Data Sheet
GACTGenerally Available Control Technology	SICStandard Industrial Classification
GHGGreenhouse Gas	SIPState Implementation Plan
gpmgallons per minute	SMALScreening Model Action Levels
grgrains	SO_xsulfur oxides
GWPGlobal Warming Potential	SO₂sulfur dioxide
HAPHazardous Air Pollutant	tphtons per hour
hrhour	tpytons per year
hphorsepower	VMTvehicle miles traveled
lbpound	VOCVolatile Organic Compound
lbs/hrpounds per hour	
MACTMaximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

JUL 03 2018

Mr. Charles Schiwitz
EHS Manager
SEMO Milling, LLC
261 River Road
Scott City, MO 63780

RE: New Source Review Permit - Project Number: 2018-02-011

Dear Mr. Schiwitz:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.



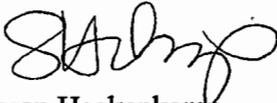
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Mr. Charles Schiwitz
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If you have any questions regarding this permit, please do not hesitate to contact Ryan Schott, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Susan Heckenkamp
New Source Review Unit Chief

SH:rsj

Enclosures

c: Southeast Regional Office
PAMS File: 2018-02-011

Permit Number: 072018-001

SEMO Milling, LLC
 031-0112
 2018-02-011

Emission Unit	Description	MHDR (lb/hr)	Emission Factors (lb/ton)			Emission Factor Source	Control Device	Capture Efficiency	Control Efficiency		
			PM	PM10	PM2.5				PM	PM10	PM2.5
EU332	Pneumatic transfer	6,000	0.00099	0.00034	0.00034	AP-42 Section 9.9.1	Baghouse	95.0%	99.0%	99.0%	95.0%
EU333	Grinder feed conveyor		0.061	0.034	0.0058	AP-42 Section 9.9.1	Baghouse	95.0%	99.0%	99.0%	95.0%
EU334	Prater fine grinder		0.012	0.012	0.012	AP-42 Section 9.9.1	Baghouse	95.0%	99.0%	99.0%	95.0%
EU335	Negative lift		0.061	0.034	0.0058	AP-42 Section 9.9.1	Baghouse	95.0%	99.0%	99.0%	95.0%
EU336	750 flour collection conveyor		0.061	0.034	0.0058	AP-42 Section 9.9.1	Baghouse	95.0%	99.0%	99.0%	95.0%
EU337	410 meal collection conveyor		0.061	0.034	0.0058	AP-42 Section 9.9.1	Baghouse	95.0%	99.0%	99.0%	95.0%

control
 C107
 C103
 C109
 C102

*These emission factors already include the capture/control efficiency

Emission Unit	Emission Rate (lb/hr)			Potential Emissions (tons/yr)		
	PM	PM10	PM2.5	PM	PM10	PM2.5
EU332	0.00297	0.00102	0.00102	0.013009	0.004468	0.0044676
EU333	0.0108885	0.006069	0.001697	0.047692	0.026582	0.00743067
EU334	0.036	0.036	0.036	0.15768	0.15768	0.15768
EU335	0.0108885	0.006069	0.001697	0.047692	0.026582	0.00743067
EU336	0.0108885	0.006069	0.001697	0.047692	0.026582	0.00743067
EU337	0.0108885	0.006069	0.001697	0.047692	0.026582	0.00743067

Totals	0.36	0.27	0.19
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$$\frac{PM_{10}}{Emfac} = \frac{30200530}{0.034}$$

$$\frac{PM_{2.5}}{Emfac} = \frac{30200734}{0.012}$$

$$\frac{PM_{2.5}}{Emfac} = \frac{30200817}{0.012}$$